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Matters relating to the mechanisms under the Kyoto Protocol
Report of the administrator of the international transaction log under the Kyoto Protocol

Annual report of the administrator of the international transaction log under the Kyoto Protocol

Note by the secretariat

Summary

The tenth annual report of the administrator of the international transaction log (ITL) provides information to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) on the activities of the ITL administrator from 1 October 2013 to 30 September 2014. This report also contains information on transactions of Kyoto Protocol units, as requested at CMP 6, as well as information on the outcomes of the sixteenth Registry System Administrators Forum, which took place on 6 and 7 November 2014. The CMP, by decision 12/CMP.1, requested the Subsidiary Body for Implementation (SBI) to consider, at its future sessions, the annual reports of the ITL administrator. The SBI may wish to take note of the information contained in this report and provide guidance to the secretariat and Parties, as necessary, concerning the implementation of registry systems.

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I. Introduction

A. Mandate

1. The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP), by decision 13/CMP.1, paragraph 38, requested the secretariat to establish and maintain an international transaction log (ITL) to verify the validity of transactions proposed by registries as established under decisions 3/CMP.1 and 13/CMP.1. The ITL is essential for the implementation of the mechanisms under Articles 6, 12 and 17 of the Kyoto Protocol.

2. The Conference of the Parties (COP), by decision 16/CP.10, requested the secretariat, as the ITL administrator, to report annually to the CMP on organizational arrangements, activities and resource requirements and to make any necessary recommendations to enhance the operation of registry systems.

3. The CMP, by decision 12/CMP.1, requested the Subsidiary Body for Implementation (SBI) to consider, at its future sessions, the annual reports of the ITL administrator, with a view to requesting the CMP to provide guidance, as necessary, in relation to the operation of registry systems.

B. Scope of the note

4. This tenth annual report of the ITL administrator provides information on the implementation of the ITL and its operational status, including the facilitation of cooperation with registry system administrators (RSAs) through the activities of the Registry System Administrators Forum (RSA Forum) and the independent assessment of registry systems. This annual report also contains information on transactions in the ITL.

5. This report covers the reporting period from 1 October 2013 to 30 September 2014.

C. Possible action by the Subsidiary Body for Implementation

6. The SBI may wish to take note of the information contained in this report and request the CMP to provide guidance to the secretariat and Parties, as necessary, concerning the implementation of registry systems.

II. Work undertaken since the publication of the ninth annual report of the administrator of the international transaction log under the Kyoto Protocol

A. Summary of work undertaken

7. The ITL administrator continued to convene the RSA Forum and to coordinate the work of its working groups.

8. The activities related to the sixth annual assessment of national registries and accounting of Kyoto Protocol units were completed successfully.

9. The ITL administrator continued to support the normal operations of the ITL. Detailed information on the operational activities and operational performance is provided in chapter II.C below.

B. Implementation activities

1. International transaction log releases

10. During the reporting period, there was one release of ITL software. This release contained the implementation of several provisions of the Doha Amendment (decision 1/CMP.8), the integration of the new clean development mechanism (CDM) carbon dioxide capture and storage projects (decision 10/CMP.7) and the support for the modalities for expedited eligibility (decision 7/CMP.9).

2. International transaction log operational procedures

11. At the end of August 2014, the ITL administrator introduced a procedure to provide guidance on the activities and reporting requirements of the true-up period[1] for the first commitment period of the Kyoto Protocol. The procedure specifies activities, timelines and the responsibilities of Parties, RSAs, expert review teams and the secretariat. It describes, in particular, the compilation and accounting report, and compliance assessment, carry-over transactions, cancellation of outstanding units and the verification of these activities via the annual assessment and review process.

3. Second commitment period update of standard electronic format reporting tools

12. Decision 14/CMP.1, annex I, paragraph 3, requests that Parties included in Annex I to the Convention (Annex I Parties) submit a standard electronic format (SEF) report, including information on emission reduction units, certified emission reductions (CERs), temporary CERs, long-term CERs, assigned amount units and removal units from its national registry transferred or acquired in the year preceding the reporting year, on a yearly basis. Each Annex I Party has been provided by the ITL administrator with an application that enables the Party to create an SEF report based on reporting requirements contained in decision 14/CMP.1.

13. During the reporting period, the Subsidiary Body for Scientific and Technological Advice (SBSTA) recommended an updated set of SEF tables that includes reporting requirements related to the second commitment period of the Kyoto Protocol for adoption by the CMP.

14. In order to provide support for the updated SEF tables, the ITL administrator prepared a new software application to enable Annex I Parties and the secretariat to generate and compare SEF reports based upon current and new reporting requirements as of 2015. This new SEF reporting application has been tested with the support of national registry administrators. A final version of the application will be made available in the first quarter of 2015, following a CMP decision on the SEF reporting format for the second commitment period of the Kyoto Protocol.

4. International transaction log technology maintenance

15. In the reporting period, the support contract for the current version of the application server software used in the ITL was extended to reconsider the option of migrating the

[1] A 100-day period after final emissions have been reported for the commitment period, during which Parties have the opportunity to undertake final decisions necessary to achieve compliance with their commitment under Article 3, paragraph 1, of the Kyoto Protocol.

application server to a different technology solution. This reconsideration was made on the basis of the refined outcomes of a feasibility study and risk assessment, as well as revised vendor quotes for the current application server's product licence and support fees.

16. The option of purchasing new updated licences for the current application server software was evaluated and the decision was made to stay with the same application server technology. This decision was adopted with a view to mitigating identified risks when transitioning to a new technology, while keeping the 'backward compatibility' of existing interfaces with national registry systems.

17. The ITL administrator routinely oversees the replacement of hardware components in the ITL system infrastructure before these components run out of warranty. In the reporting period, the database server software was migrated to a newer version in order to increase its performance, to address identified security vulnerabilities and to extend the time frame for commercial support.

C. Operational activities

1. Support for registry testing

18. Since November 2012, the ITL administrator has offered registries the opportunity to perform the Data Exchange Standards (DES) Annex H[2] testing for the second commitment period of the Kyoto Protocol on a voluntary basis. While, in the reporting period, no voluntary Annex H testing for the second commitment period was requested by registries, mandatory full Annex H testing was conducted and completed for two registries as part of a planned migration of their software and hosting arrangements. In addition, one registry and the European Union Emissions Trading System (EU ETS) disaster recovery testing exercises were planned and performed with the support of the ITL administrator in the reporting period.

2. Enhanced technical cooperation with the European Union Emissions Trading System

19. During the reporting period, the ITL administrator held several technical meetings with its counterpart of the EU ETS. During these meetings, representatives of the two systems discussed different technical subjects related to the ITL, its supported processes, the European Union Transaction Log[3] and the Consolidated System of European Union Registries. These regular exchanges have helped to enhance support for respective test activities and to improve the mobilization of resources for the resolution of issues.

3. International transaction log disaster recovery testing

20. The yearly disaster recovery testing of the ITL was executed in July 2014 in collaboration with the EU ETS support teams and with the participation of two registries, one of which being an EU ETS registry. The testing was successful and the time to failover, that is, the time within which the ITL service is restored on the secondary site after a simulated disaster take place on the primary site, was 90 minutes, where the recovery time objective for such a situation is three hours.

[2] Annex H to the DES, version 1.1.10, containing functional test suites covering modalities, rules and guidelines for emissions trading under Article 17 of the Kyoto Protocol.

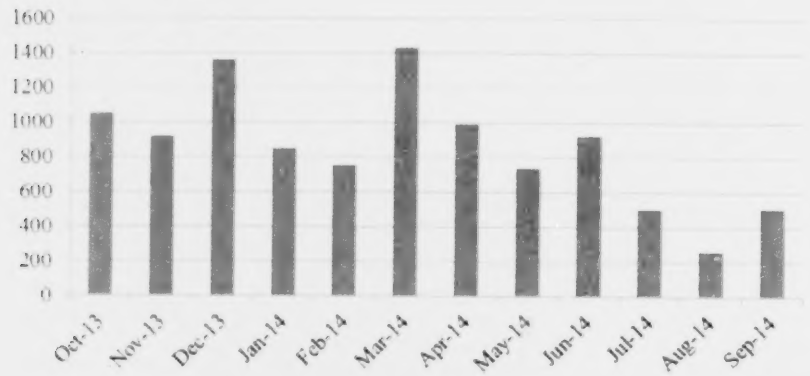
[3] The European Union Transaction Log replaced the community independent transaction log, following the consolidation of the EU ETS registries in June 2012.

4. Transactions data and analysis

21. The volume of activity in the ITL can be measured through various transactional and operational metrics. Figure 1 shows the number of transactions proposed to the ITL in the production environment[4] each month from 1 October 2013 to 30 September 2014. Furthermore, the breakdown by registry of the number of transactions and the number of Kyoto Protocol units subject to transactions proposed to the ITL from 1 October 2013 to 30 September 2014 is shown in annexes III and IV, respectively.

Figure 1

Number of transactions proposed to the international transaction log from 1 October 2013 to 30 September 2014

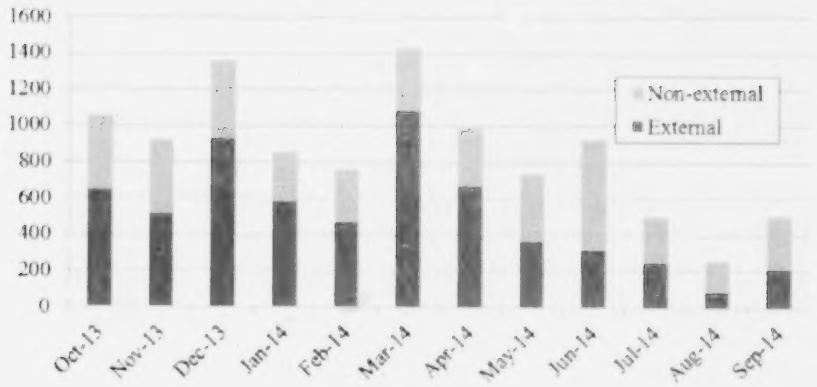


22. There are two categories of transactions in the ITL: external transactions and non-external transactions. External transactions are transactions in which the units involved leave the originating registry and arrive in a different acquiring registry. Non-external transactions are transactions in which the units stay in the same registry although they can change account, move to another account type or change unit type. Figure 2 shows the evolution of the breakdown of external and non-external transactions in the ITL from 1 October 2013 to 30 September 2014.

Figure 2

Number of external transactions compared with non-external transactions from 1 October 2013 to 30 September 2014

[4] The live system of the ITL used to support emissions trading under the Kyoto Protocol.

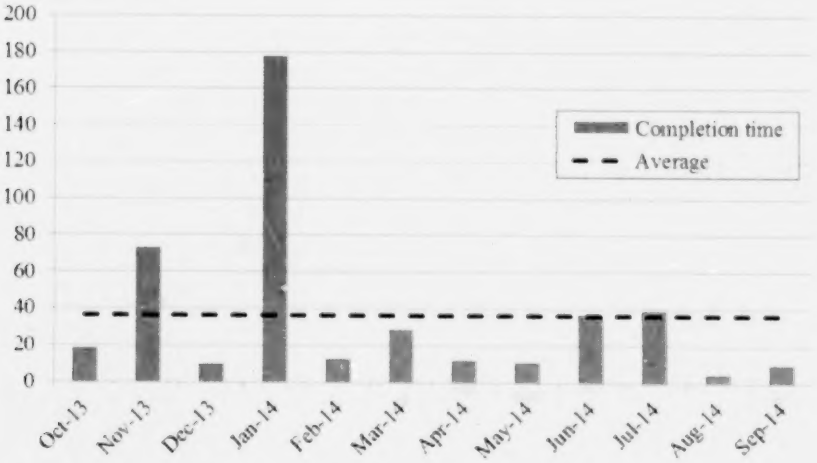


23. Transactions proposed to the ITL end in one of three statuses: terminated, cancelled or completed.

24. The transaction completion time includes the latency incurred by the travel time of messages through the registry network and the processing time within registries, the ITL and the European Union Transaction Log if an EU ETS registry is involved in the transaction. The monthly averages of the transaction completion time from 1 October 2013 to 30 September 2014 are displayed in figure 3.

Figure 3

Monthly averages of transaction completion time in seconds from 1 October 2013 to 30 September 2014



25. The abnormally high transaction completion time observed in January 2014 is a result of two discrete events. The first event was a major software change in one of the connected national registries that led to temporary increased response times after reconnection. The second event was due to an incident where the processing workflow of a single transaction had stopped for more than two hours in one of the connected national registries. This incident was eventually resolved through a manual intervention.

26. Transactions which are not compliant with ITL specifications in the DES are terminated when they are proposed to the ITL. A transaction termination ratio is obtained by dividing the number of terminated transactions by the number of transactions proposed in a given time frame. This ratio can be considered as an indicator of the level of internal checking performed by registries to ensure that the proposed transaction and its data records are accurate. The evolution of this ratio from 1 October 2013 to 30 September 2014 is shown in figure 4.

27. When a transaction has not progressed in its workflow for 24 hours, it is cancelled in the ITL through the ITL transaction clean-up mechanism. A transaction cancellation ratio is obtained by dividing the number of cancelled transactions by the number of proposed transactions in a given time frame. This ratio can be considered as an indicator of the extent of communication problems in registry systems. Figure 4 provides the transaction cancellation ratios from 1 October 2013 to 30 September 2014.

Figure 4

Transactions cancellation and termination ratios from 1 October 2013 to 30 September 2014

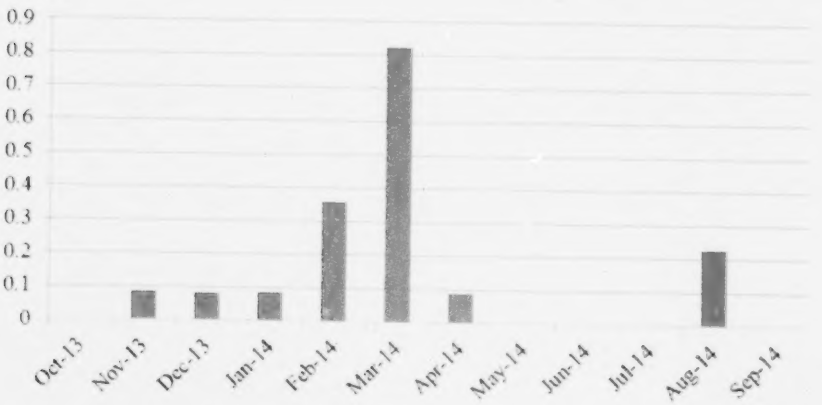
(Per cent)

28. The reconciliation process in the ITL ensures that registries keep an accurate record of their Kyoto Protocol unit holdings. The occurrence of a reconciliation inconsistency indicates a discrepancy between the ITL amounts and the records of the registry. The inconsistent reconciliation ratio is obtained by dividing the number of inconsistent reconciliations by the number of reconciliations initiated in a given time frame. It is an indicator of the capacity of registries to maintain accurate records of their Kyoto Protocol unit holdings. Figure 5 shows the inconsistent reconciliation ratios from 1 October 2013 to 30 September 2014.

Figure 5

Inconsistent reconciliation ratio from 1 October 2013 to 30 September 2014

(Per cent)



29. The increased inconsistent reconciliation ratio observed in February, March and August 2014 is the result of national registry software changes that led to occurrences of mismatching totals following software roll-outs.

30. Unavailability of the ITL prevents registries from performing their transactions. This can occur owing to planned maintenance windows, of which RSAs are informed in advance, and unplanned outages caused by operational incidents. The ITL availability for the period from 1 October 2013 to 30 September 2014, taking into account unplanned outages, was 99.94 per cent.

31. The ITL started to receive units applicable to the second commitment period of the Kyoto Protocol in April 2013, when a first issuance of the second commitment period CERs was made in the CDM registry. As at 30 September 2014, these CERs had been issued for 290 CDM projects, for a total of 58,985,372 units.

32. Out of the 58.9 million of the second commitment period CERs issued, more than 4.5 million were held by national registries. These 4.5 million units were spread across 16 national registries.

33. These national registries (the CDM registry excluded) proposed to the ITL a total of 72 transactions with the second commitment period units by the end of the reporting period. Out of 72 transactions, 51 were successful. A high termination ratio of transactions with these units is mostly owing to mismatches between the commitment period of the accounts and that of the units, and to the use of the first and the second commitment period units in a same transaction proposal, which is not allowed in the ITL.

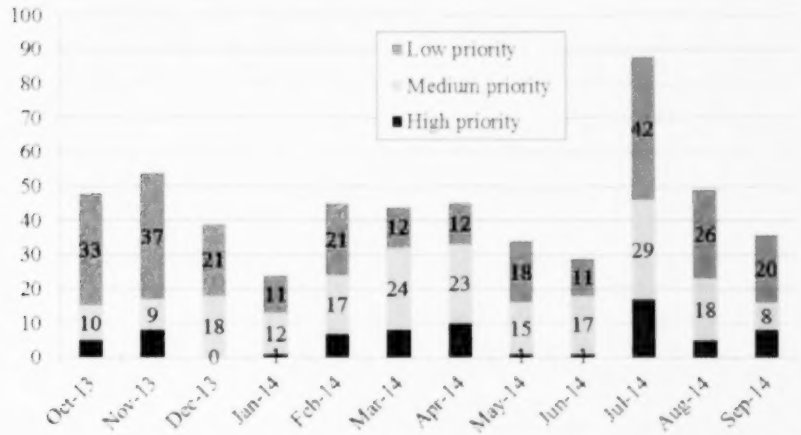
5. International transaction log service desk

34. The ITL service desk is the focal point for all support provided to RSAs in the operation and testing of registries. The ITL service desk also carries out the technical activities related to the initialization and go-live processes under the supervision of the ITL administrator. The ITL service desk provides continuous support to RSAs from 8 p.m. on Sundays until midnight on Fridays based on Coordinated Universal Time.

35. Figure 6 tracks the number of support requests handled by the ITL service desk during the reporting period, categorized by priority. High-priority support requests are initiated when the processing of transactions from one or more registries cannot be performed. Medium-priority support requests are related to the performance or the stability of the ITL, which may affect transaction processing. Low-priority support requests are related to information items or performance issues which do not directly affect transaction processing.

Figure 6

Number of support requests handled by the international transaction log service desk from 1 October 2013 to 30 September 2014



36. The increased number of support requests observed in July 2014 was the result of the ITL disaster recovery testing exercise which was carried out during that period.

6. Change management activities

37. The ITL administrator has established a change management procedure since the go-live of the ITL. This procedure is followed when making changes to the ITL software and to the procedures governing different processes.

38. In the reporting period, there were five ITL change requests directly approved by the ITL change manager or by consultations with all the registry representatives. Table 1 provides a list of these change requests.

Table 1

Changes approved for the international transaction log from 1 October 2013 to 30 September 2014

Change title[a]	*Date proposed*	*Status as at 30 September 2014*
RSNCM 53 – IAR documentation update (expedited eligibility)	12 June 2014	Approved
RSNCM 52 – Support for modalities for expediting the establishment of eligibility	23 December 2013	Approved
RSNCM 51 – Modify check 5057 to ensure that a single project is used per conversion	20 January 2014	Approved
RSNCM 50 – Update to the SIAR procedure in preparation for the 2014 assessment cycle	20 December 2013	Approved
RSNCM 38 – Add a project ID check for cancellations of reversal of storage and non-submission of certification reports	25 June 2012	Approved

Abbreviations: IAR = independent assessment report, ID = identification, SIAR = standard independent assessment report.

[a] The documents contain a prefix RSNCM, which refers to registry systems network change management.

D. Independent assessment of national registries and go-live activities

1. Annual assessment activities

39. The process of creating the standard independent assessment report (SIAR), mandated by decision 16/CP.10, paragraph 5(a), expands on the initial independent assessment of national registries. It defines the process to be followed by RSAs when reporting annually on changes in the national registry and providing information on the accounting of Kyoto Protocol units, and guides the activities to be carried out by assessors when reviewing reported changes and accounting information. The final SIARs are forwarded to expert review teams for consideration as part of the review of national registries, as described in decision 22/CMP.1, in accordance with decision 16/CP.10, paragraph 6(k).

40. In accordance with decision 16/CP.10, paragraphs 5(a) and 6(c), the ITL administrator has continued to encourage and promote the engagement of RSAs in the SIAR process, with a view to stimulating the sharing of information on national registry reporting and review, thus improving the quality of national registry information in annual submissions and optimizing the ITL costs. In January 2014, the ITL administrator reissued its invitation to all RSAs to participate in the SIAR process as assessors. Fourteen RSAs contributed to the 2014 SIAR process.

41. Before the registry assessment by the SIAR assessors, the Party submits a national inventory report (NIR) and an SEF report to the secretariat. In 2014, 36 Parties submitted the annual SEF report with information on Kyoto Protocol units for 2013. Three submissions of SEF tables were initially found to be inconsistent with ITL records. Corrections were provided by the Parties concerned and resubmissions were in line with

ITL records. Thirty-six NIRs containing information on changes to the national registry and Kyoto Protocol units assessed under the SIAR process were submitted during 2014.

42. The SIAR process was executed successfully during the reporting period. The following issues regarding the assessed registries were identified:

(a) Some Parties did not fully comply with the requirement to make information publicly accessible as specified in decision 13/CMP.1, annex, paragraphs 44–48;

(b) Some Parties did not fully comply with the requirement found in decision 15/CMP.1, annex, paragraph 32, to provide complete information on changes in the national registry.

43. The issues were addressed in the recommendations provided by the assessors in the final SIARs.

2. Go-live activities

44. In the reporting period, no registry initiated a go-live process. As a result, there was no support for this particular process provided by the ITL administrator. As at 30 September 2014, there were 36 national registries connected to the ITL. The status of the individual registries as at 30 September 2014 is shown in annex I.

E. Registry System Administrators Forum

45. The ITL administrator convenes the RSA Forum to coordinate the technical and management activities of RSAs and to provide a platform for RSAs to cooperate with each other and to provide input to the development of common operational procedures, recommended practices and information-sharing measures for registry systems, in accordance with decision 16/CP.10.

46. Participation in the RSA Forum is open to all administrators of national and consolidated registries, administrators of the CDM registry, the administrator of the supplementary transaction log and ITL vendors. The ITL administrator also invites a number of Parties to the Kyoto Protocol which are not included in Annex I to the Convention to participate.

47. The sixteenth RSA Forum was hosted by the ITL administrator in Bonn, Germany, on 6 and 7 November 2014. The key objectives of the meeting were the following:

(a) To provide RSAs with an update on operational status and issues;

(b) To provide RSAs with training on the DES, the ITL administrator application, testing environments and the common operational procedures;

(c) To inform RSAs about a new version of the ITL and the new SEF reporting software;

(d) To provide feedback on the independent assessment reporting process as executed during the reporting period;

(e) To provide RSAs with an update on the activities and outcomes of the working groups on the second commitment period, security and combating criminal activity in registry systems;

(f) To inform RSAs about the additional period for fulfilling commitments requirements;

(g) For Parties to share their experiences with carbon market development and with registry disaster recovery testing and to seek input for a service benchmarking exercise.

F. Working group on the second commitment period

48. The purpose of the working group on the second commitment period is to assess the impact of decisions made at CMP 7 and CMP 8 on registry systems and the ITL, and to recommend changes to the DES and common operational procedures.

49. In February 2014, the ITL administrator notified RSAs of its decision to produce a draft version of the DES which incorporates the results of the in-session discussion text relating to agenda item 12(a), "Implications of the implementation of decisions 2/CMP.7 to 4/CMP.7 and 1/CMP.8 on the previous decisions on methodological issues related to the Kyoto Protocol, including those relating to Articles 5, 7 and 8 of the Kyoto Protocol", of SBSTA 39 and agenda item 3(a), "Report of the Subsidiary Body for Scientific and Technological Advice", of CMP.9, and to implement this draft version in the ITL.

50. The draft DES is maintained in line with the relevant draft change requests and includes a revised Annex H test suite for the second commitment period.

51. In its notification, the ITL administrator noted that a final DES will be produced once all relevant negotiations are completed by Parties, in particular with regard to carry-over of units and Article 3, paragraph 7 ter, of the Kyoto Protocol.

52. The working group subsequently met to review the new draft DES, and to ensure that the new functionalities do not jeopardize the ability of the national registries and the ITL to process transactions of units applicable to the first commitment period (i.e. that the system is backward compatible). The working group concluded that such backward compatibility would be ensured.

53. The working group also discussed the need for retesting national registries for the second commitment period and concluded that the current process defined in the SIAR is adequate for this purpose.

54. Finally, the working group reviewed the common operational procedure for the true-up period, using the draft SBI 40 conclusions on the date of the completion of the expert review process under Article 8 of the Kyoto Protocol as a basis for its work. During these discussions and at the RSA Forum, some RSAs expressed concern about the 45-day length of the period between the end of the true-up period and the submission of the true-up period report,[5] which they perceive as challenging given the due date of the true-up period report (2 January 2016).

G. Security working group

55. The purpose of the security working group under the RSA Forum is to further elaborate on options for enhancing information security controls in systems supporting emissions trading under the Kyoto Protocol, as requested by SBI 40.[6]

56. The security working group is coordinating a registry-specific risk assessment which will be followed by a security control implementation analysis. Based on the results of this,

[5] The true-up period report, due at the end of the commitment period, is intended to enable the determination of the Party's compliance with its commitment under Article 3, paragraph 1, of the Kyoto Protocol.

[6] FCCC/SBI/2014/8, paragraph 72.

the security working group will identify and prioritize implementation steps, and prepare an implementation plan for further consideration at SBI 42.

57. The security working group identified a need to strengthen its capacity by engaging an external expert with information security skills. This security expert is responsible for identifying methods to support risk assessments, and for planning, preparing and implementing applicable security controls.

H. Working group on combating criminal activity in registry systems

58. Following a request made during the previous RSA Forum, the ITL administrator set up a working group on combating criminal activity in registry systems. The working group established terms of reference for its work, identifying the scope, goals and work areas it should be tasked with.

59. Work has started on identifying the priorities. However, so far, no substantive outcome of the working group has been produced.

III. Organizational arrangements and resources

60. The functions of the ITL administrator have been assumed by the Information Technology Services programme of the secretariat. It is also responsible for the software delivery and information technology infrastructure support for the secretariat. Functions related to change management in registry systems, including the support to negotiations of accounting rules and checks, have been assumed by the Mitigation, Data and Analysis programme.

A. Resources requirements and expenditure

61. The resource requirements for activities relating to the ITL and the ITL administrator, to be funded from supplementary sources for the bienniums 2006–2007,[7] 2008–2009,[8] 2010–2011,[9] 2012–2013[10] and 2014–2015[11] were identified in the proposed programme budget for each of these bienniums.

62. The budget for the ITL for the biennium 2014–2015,[12] not including the deduction of fees paid by Parties, which were not listed in decision 11/CMP.3, annex II, is EUR 5,481,520. This budget includes a working capital reserve equal to EUR 227,970.

63. The CMP, by decision 11/CMP.3, requested the Executive Secretary to provide a breakdown of the expenditures on the development and operation of the ITL with a view to optimizing the cost structure. Table 2 shows the expenditure of the ITL in the biennium 2014–2015 as at 30 September 2014, by object of expenditure.

[7] FCCC/SBI/2005/8/Add.2
[8] FCCC/SBI/2007/8/Add.2
[9] FCCC/SBI/2009/2/Add.3
[10] FCCC/SBI/2011/2/Add.3
[11] FCCC/SBI/2013/6/Add.3
[12] Decision 10/CMP.9

Table 2
Expenditure of the international transaction log for the biennium 2014–2015
(Euros)

Object of expenditure	*As at 30 September 2014*
Staff costs	432 387
Contractual services[a]	1 347 326
Expert groups	15 117
Travel of staff	0
General operating expenses	3 031
Contributions to common services	20 333
Programme support costs	236 365
Total expenditure	**2 054 559**

[a] The amount for contractual services includes EUR 282.787 obligated for contractual services until the end of 2014 but not spent in the first nine months of 2014

64. Table 3 shows the breakdown of expenditure, as expected, for contractors and consultants for the ITL in 2014. Operation services are activities performed by the developer and operator of the ITL to sustain all operations of the ITL such as maintaining the infrastructure and operating the ITL service desk. Software maintenance services are services performed by the developer of the ITL to support the software implementation activities outlined in this report. Operational procedure services cover the expenditure required to deliver services related to the elaboration and execution of the common operational procedures pursuant to decision 16/CMP.10. Consultancy expenditures are incurred when the secretariat needs to consult experts in specific fields.

Table 3
Breakdown of expenditure for contractors and consultants for the international transaction log in 2014

Object of expenditure	*Percentage of expenditure for contractors and consultants*
Operation services	53
Production and disaster recovery environments	38
Service desk	7
Registry developer support	6
Security and disaster recovery testing	2
Software maintenance services	38
Operational procedure services	2
Consultancies	7

65. CMP 4 requested the ITL administrator to report on planned activities and the related resource requirements with a view to ensuring that adequate means are available to perform these activities.[13]

66. In 2014, the focus of activities continued to be to ensure that registry systems operate securely and reliably. In addition, the ITL administrator continued to make

[13] FCCC/KP/CMP/2008/11, paragraph 72.

arrangements for support of the true-up period and for the second commitment period of the Kyoto Protocol by the ITL and registry systems.

67. The staffing level was lower than projected in the ITL budget owing to staff turnover and ongoing recruitment activities. In 2014, the recruitment of an operation lead and a business analyst was completed. The projected level of staffing will stay unchanged in 2015 and the secretariat is making efforts to complete all other outstanding recruitment activities before the end of the year. The level of effort required is expected to remain high owing to the amount of work related to the implementation of the second commitment period of the Kyoto Protocol, the true-up period for the first commitment period and the need to finalize the renewal of technology components from the ITL infrastructure.

68. The members of ITL staff perform the following activities:

(a) Initializing and performing go-live events for the national registries not yet connected to the ITL or potential new national registries;

(b) Supporting future changes to the DES and releases of ITL and SEF software resulting from operational experience and changes adopted under the common operational procedures for change management;

(c) Steering the work of a working group to address technical issues related to the end of the first commitment period of the Kyoto Protocol, the true-up period and the second commitment period of the Kyoto Protocol with a view to adopting revised formats for data exchange and/or common operational procedures;

(d) Steering the work of a working group to improve the security of registry systems based on internationally recognized information system security standards;

(e) Steering the work of a working group to combat fraud and criminal activities in registry systems;

(f) Upgrading the hardware and software in the ITL infrastructure, as necessary;

(g) Administering and maintaining the RSA extranet;

(h) Continuing to support the live operations and test activities of the ITL system and registry systems in all supported environments;

(i) Performing an annual disaster recovery test and security audit on the ITL, and taking into account the results of this test and audit to enhance the reliability and security of the ITL;

(j) Performing all required activities to support the common operational procedures;

(k) Continuing to facilitate cooperation among RSAs through the RSA Forum, its working groups and registry developers;

(l) Offering online and classroom training to RSAs on the general functioning of the ITL and registry systems, the common operational procedures and other relevant knowledge areas;

(m) Continuing to support the obligations of the ITL administrator in accordance with all relevant decisions of the COP and the CMP.

B. Income to support the activities of the administrator of the international transaction log

69. As at 30 September 2014, USD 1,963,788 in ITL user fees had been received from Parties for 2007,[14] USD 4,518,060 for 2008, USD 4,745,041 for 2009, EUR 3,014,423 for 2010, EUR 3,014,423 for 2011, EUR 2,885,010 for 2012, EUR 2,759,483 for 2013 with EUR 125,527 outstanding and EUR 1,988,735 for 2014 with EUR 752,025 outstanding. One Party has already paid the 2015 user fee and several Parties have been credited with advances towards their 2015 user fees as a result of overpayment of the 2014 fee. A total amount of EUR 79,591 has been received for 2015. The secretariat would like to express its gratitude to Parties that have paid their fees. The scale of ITL fees and the status of fee payments for the biennium 2014–2015 as at 30 September 2014 are shown in annex II. The status of fees as at 30 September 2014 is shown in tables 4 and 5.

Table 4

Fees for international transaction log activities in the period 2007–2009 and cumulative shortfall as at 30 September 2014

(United States dollars)

	2007	*2008*	*2009*
Fees budgeted	2 500 000	4 518 060	4 745 741
Fees received	1 963 788	4 518 060	4 745 041
Shortfall	536 212	0	0
Cumulative shortfall	536 212	536 212	536 212

Table 5

Fees for international transaction log activities in the period 2010–2014 and cumulative shortfall as at 30 September 2014

(Euros)

	2010[a]	*2011*	*2012*	*2013*	*2014*[b]
Fees budgeted	3 014 423	3 014 423	2 885 010	2 885 010	2 740 760
Fees received	3 014 423	3 014 423	2 885 010	2 759 483	1 988 735
Shortfall	0	0	0	125 527	752 025
Cumulative shortfall	374 812	374 812	374 812	500 339	1 126 837

[a] The shortfall of 2009 in United States dollars was carried over to 2010 by converting at the average exchange rate of EUR 0.699 applicable on the day of conversion.

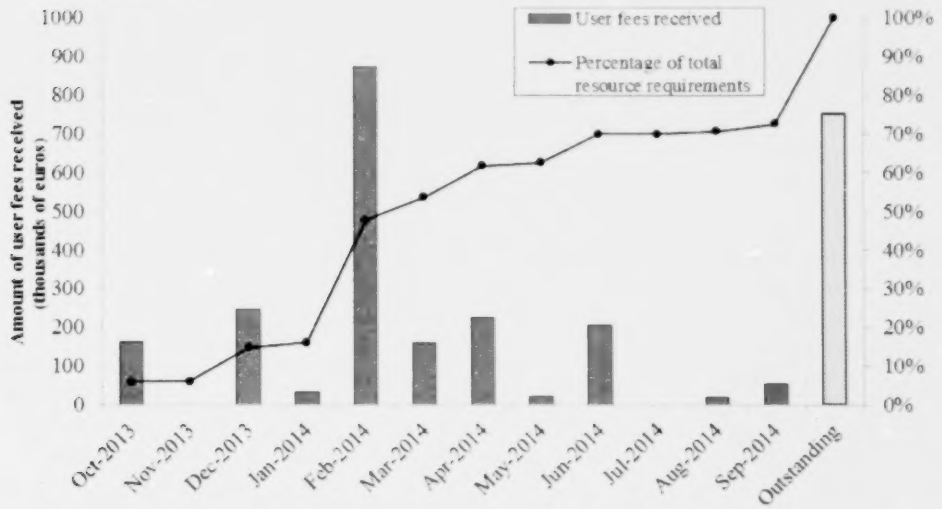
[b] Canada's shortfall of EUR 125,527 is not carried over to 2014 and the following years owing to Canada's withdrawal from the Kyoto Protocol and the resulting disconnection of its registry from the international transaction log.

70. Delays in receiving user fees from Parties had been noted in previous annual reports of the ITL administrator. As at 30 September 2014, EUR 752,025 (27 per cent of the fees budgeted for 2014) was still due. Figure 7 shows the user fees received for 2014 in 2013 and 2014 as at 30 September 2014 and the cumulative percentage of resource requirements, by month.

[14] This figure differs from the one in the annual reports of the ITL administrator prior to 2011 because USD 48,693 in user fees for 2007 was received in July 2011.

Figure 7

International transaction log user fees for 2014 received in 2013 and 2014 as at 30 September 2014



C. Actions and proposals to optimize the cost structure of the international transaction log

71. The ITL administrator is seeking ways to further optimize the ITL cost structure and is currently considering the following measures:

(a) Optimizing technology refresh, licence and third-party support costs in alignment with the natural end of the life cycle of the software and hardware used to run the ITL;

(b) Systematization, documentation and addressing of typical incident, user error and user problem scenarios in order to minimize their reoccurrence and associated remedy costs;

(c) Phasing out of a part of the infrastructure maintained in the secretariat used to test and gain access to the ITL production data. This measure will remove hardware, software and maintenance costs required to operate the above-mentioned part of the infrastructure. Testing of and access to the ITL production data will be ensured through different means;

(d) Using secretariat staff instead of consultants, where possible.

Annex I

Registry status as at 30 September 2014

Registry	*Date independent assessment report was issued*	*Date of live connection to the international transaction log*
Australia	19 December 2008	19 December 2008
Austria	12 July 2007	16 October 2008
Belgium	7 December 2007	16 October 2008
Bulgaria	10 April 2008	16 October 2008
Croatia	30 April 2008	11 December 2009
Clean development mechanism	Not applicable	14 November 2007
Czech Republic	1 August 2007	16 October 2008
Denmark	16 October 2008	16 October 2008
Estonia	12 November 2007	16 October 2008
European Union	1 February 2008	16 October 2008
Finland	16 November 2007	16 October 2008
France	9 November 2007	16 October 2008
Germany	23 November 2007	16 October 2008
Greece	27 September 2007	16 October 2008
Hungary	8 August 2007	11 July 2008
Iceland	3 January 2008	6 May 2010
Ireland	19 September 2007	16 October 2008
Italy	5 December 2007	16 October 2008
Japan	9 July 2007	14 November 2007
Latvia	13 November 2007	16 October 2008
Liechtenstein	7 December 2007	21 October 2008
Lithuania	29 October 2007	16 October 2008
Luxembourg	7 December 2007	16 October 2008
Monaco	9 April 2008	Not available
Netherlands	19 September 2007	16 October 2008
New Zealand	27 July 2007	3 December 2007
Norway	27 September 2007	21 October 2008
Poland	5 December 2007	16 October 2008
Portugal	24 October 2007	16 October 2008
Romania	30 April 2008	16 October 2008
Russian Federation	12 November 2007	4 March 2008
Slovakia	13 September 2007	16 October 2008
Slovenia	25 October 2007	16 October 2008
Spain	8 October 2007	16 October 2008
Sweden	9 November 2007	16 October 2008
Switzerland	8 August 2007	4 December 2007
Ukraine	10 December 2007	28 October 2008
United Kingdom of Great Britain and Northern Ireland	16 August 2007	16 October 2008

Annex II

Scale of fees and status of international transaction log fee payments for the biennium 2014–2015 as at 30 September 2014

Party	Scale of fees	2014			2015		
		Budgeted	Received	Outstanding	Budgeted	Received	Outstanding
Australia	2.841	77 854	77 854	0	77 854	0	77 854
Austria	1.588	43 526	43 483	43	43 526	0	43 526
Belgium	1.973	54 071	54 071	0	54 071	0	54 071
Bulgaria	0.036	974	974	0	974	0	974
Croatia	0.079	2 178	2 178	0	2 178	0	2 178
Czech Republic	0.503	13 783	13 783	0	13 783	0	13 783
Denmark	1.323	36 248	36 248	0	36 248	0	36 248
Estonia	0.028	774	774	0	774	0	774
European Commission	2.685	73 584	73 584	0	73 584	0	73 584
Finland	1.009	27 651	27 651	0	27 651	0	27 651
France	10.667	292 360	0	292 360	292 360	0	292 360
Germany	15.350	420 702	420 702	0	420 702	0	420 702
Greece	1.065	29 199	29 199	0	29 199	199	29 000
Hungary	0.437	11 978	11 978	0	11 978	0	11 978
Iceland	0.737	20 201	20 176	25	20 201	0	20 201
Ireland	0.797	21 835	21 835	0	21 835	21 835	0
Italy	9.089	249 121	0	249 121[a]	249 121	0	249 121
Japan	14.939	409 442	204 721	204 721	409 442	0	409 442
Latvia	0.032	888	888	0	888	177	711
Liechtenstein	0.188	5 158	5 158	0	5 158	0	5 158
Lithuania	0.055	1 519	1 519	0	1 519	302	1 217
Luxembourg	0.153	4 184	4 184	0	4 184	0	4 184
Monaco	0.181	4 957	4 957	0	4 957	0	4 957
Netherlands	3.352	91 866	91 866	0	91 866	18 288	73 578
New Zealand	0.961	26 333	26 321	12	26 333	0	26 321
Norway	2.319	63 555	63 555	0	63 555	12 652	50 903
Poland	0.896	24 557	24 557	0	24 557	0	24 557
Portugal	0.943	25 846	25 846	0	25 846	0	25 846
Romania	0.125	3 439	3 439	0	3 439	0	3 439
Russian Federation	2.743	75 189	75 189	0	75 189	0	75 189
Slovakia	0.113	3 095	3 095	0	3 095	616	2 479
Slovenia	0.171	4 699	4 699	0	4 699	0	4 699
Spain	5.311	145 564	145 564	0	145 564	0	145 564
Sweden	1.917	52 552	52 552	0	52 552	10 462	42 090
Switzerland	2.760	75 647	75 647	0	75 647	15 060	60 587
Ukraine	0.745	20 431	14 688	5 743	20 431	0	20 431
United Kingdom of Great Britain and Northern Ireland	11.887	325 800	325 800	0	325 800	0	325 800
Total	**100.000**	**2 740 760**	**1 988 735**	**752 025**	**2 740 760**	**79 591**	**2 661 157**

[a] Outstanding fee from Italy for 2014 was received on 7 October 2014.

Annex III

Number of transactions proposed to the international transaction log[1] from 1 October 2013 to 30 September 2014

Registry	*Acquisition*[2]	*Transfer*[3]	*Forwarding*[4]	*Internal transfer*[5]	*Issuance*[6]	*Retirement*[7]	*Cancellation*[8]	*Total*
Australia	13	8	0	0	2	0	5	28
Austria	17	8	0	1	0	1	0	27
Belgium	175	18	0	0	0	0	0	193
Bulgaria	2	1	0	0	0	0	0	3
Clean development mechanism	0	70	1 215	0	854	0	94	2 233
Croatia	0	0	0	0	0	0	0	0
Czech Republic	12	7	0	0	0	0	2	21
Denmark	27	31	0	2	0	0	1	61
Estonia	1	3	0	0	0	0	1	5
European Union	1 987	1 636	0	0	0	0	457	4 080
Finland	96	51	0	2	0	0	12	161
France	140	37	0	4	2	0	16	199
Germany	153	73	0	4	2	0	62	294
Greece	12	2	0	0	0	1	0	15
Hungary	0	1	0	0	2	0	0	3
Iceland	10	0	0	0	0	0	0	10
Ireland	10	1	0	0	0	0	0	11
Italy	122	93	0	0	0	4	7	226
Japan	80	60	0	0	0	0	0	140
Latvia	4	11	0	0	0	0	0	15
Liechtenstein	1	1	0	2	0	0	1	5
Lithuania	4	16	0	1	0	0	0	21
Luxembourg	34	3	0	0	0	0	0	37
Netherlands	116	163	0	2	0	3	81	365
New Zealand	230	49	0	0	0	0	69	348
Norway	138	12	0	0	0	0	7	157
Poland	53	11	0	3	3	0	2	72
Portugal	46	13	0	1	0	0	1	61
Romania	0	6	0	0	0	0	0	6
Russian Federation	1	3	0	6	3	0	1	14
Slovakia	5	3	0	1	0	0	1	10
Slovenia	1	1	0	0	0	0	0	2
Spain	138	246	0	85	0	0	7	476
Sweden	104	231	0	100	0	0	61	496
Switzerland	711	1 456	0	1 061	0	0	176	3 404
Ukraine	2	14	0	0	14	0	0	30

[1] Completed transactions of assigned amount units, emission reduction units, removal units, certified emission reductions, long-term emission reductions and temporary emission reductions have been accounted for.

Registry	*Acquisition*[a]	*Transfer*[b]	*Forwarding*[c]	*Internal transfer*[d]	*Issuance*[e]	*Retirement*[f]	*Cancellation*[g]	*Total*
United Kingdom of Great Britain and Northern Ireland	233	409	0	1	0	1	55	699
Total	**4 678**	**4 748**	**1 215**	**1 276**	**882**	**10**	**1 119**	**13 928**

[a] Acquisition from another national registry. See decision 13/CMP.1, annex, paragraph 30.

[b] Transfer to another national registry. See decision 13/CMP.1, annex, paragraph 30.

[c] Forwarding from the clean development mechanism registry to a national registry. See decision 3/CMP.1, annex, paragraph 66(b). Note that this excludes transfers from the clean development mechanism registry to a national registry in support of the Adaptation Fund.

[d] Transfer within the registry. See decision 13/CMP.1, annex, paragraph 30.

[e] See decision 13/CMP.1, annex, paragraphs 23–29; decision 3/CMP.1, annex, paragraphs 64–66; and decision 5/CMP.1, annex, paragraphs 36 and 37. Issuance of emission reduction units by converting assigned amount units or removal units is included.

[f] See decision 13/CMP.1, annex, paragraph 34.

[g] See decision 13/CMP.1, annex, paragraph 33.

Annex IV

Number of Kyoto Protocol units subject to transactions proposed to the international transaction log[1] from 1 October 2013 to 30 September 2014

Registry	*Acquisition*[2]	*Transfer*[3]	*Net transfer*[4]	*Forwarding*[5]	*Internal transfer*[6]	*Issuance*[7]	*Retirement*[8]	*Cancellation*[9]
Australia	726 777	620 094	–106 683	0	0	49 742 309	0	38 811 275
Austria	1 275 245	52 754	–1 222 491	0	10 697 124	0	28 380 771	0
Belgium	5 907 726	3 338 932	–2 568 794	0	0	0	0	0
Bulgaria	21 442	750 000	728 558	0	0	0	0	0
Clean development mechanism	0	4 927 958	4 927 958	47 376 477	0	103 967 819	0	1 231 866
Croatia	0	0	0	0	0	0	0	0
Czech Republic	25 399	30 906	5 507	0	0	0	0	8 157
Denmark	310 180	523 818	213 638	0	21 962	0	0	17 767
Estonia	1 120	2 061 197	2 060 077	0	0	0	0	2 100
European Union	199 996 883	80 252 378	–119 744 505	0	0	0	0	1 941 888
Finland	803 437	1 167 737	364 300	0	4 740	0	0	20 725
France	1 919 228	3 646 240	1 727 012	0	26 290	11 241 834	0	11 415 433
Germany	2 163 247	2 843 680	680 433	0	10 643	13 618	0	1 092 014
Greece	126 061	19 268	–106 793	0	0	0	65 844 741	0
Hungary	0	22 644	22 644	0	0	51 102	0	0
Iceland	12 255	0	–12 255	0	0	0	0	0
Ireland	43 177	3 770	–39 407	0	0	0	0	0
Italy	2 504 584	6 546 158	4 041 574	0	0	0	178 701 164	976
Japan	2 802 506	10 851 894	8 049 388	0	0	0	0	0
Latvia	1 313 847	1 403 094	89 247	0	0	0	0	0
Liechtenstein	36 300	66 300	30 000	0	30 000	0	0	383
Lithuania	82 263	61 493	-20 770	0	91	0	0	0
Luxembourg	1 266 523	80 787	–1 185 736	0	0	0	0	0

[1] Completed transactions of assigned amount units, emission reduction units, removal units, certified emission reductions, long-term emission reductions and temporary emission reductions have been accounted for.

Registry	*Acquisition*[a]	*Transfer*[b]	*Net transfer*[c]	*Forwarding*[d]	*Internal transfer*[e]	*Issuance*[f]	*Retirement*[g]	*Cancellation*[h]
Netherlands	6 391 676	40 057 367	33 665 691	0	157	0	236 321 691	217 412
New Zealand	56 761 605	18 088 048	–38 673 557	0	0	0	0	28 105
Norway	3 382 149	694 360	–2 687 789	0	0	0	0	108 747
Poland	62 707	1 414 339	1 351 632	0	5 543	356 310	0	2
Portugal	289 954	1 397 662	1 107 708	0	54 900	0	0	62 610
Romania	0	63 931	63 931	0	0	0	0	0
Russian Federation	105 443	17 227 084	17 121 641	0	55 226 889	25 297 463	0	24 569 976
Slovakia	894	7 002 697	7 001 803	0	985	0	0	1
Slovenia	1	209	208	0	0	0	0	0
Spain	8 576 592	4 398 181	–4 178 411	0	3 383 591	0	0	6 469
Sweden	2 383 514	9 124 984	6 741 470	0	2 967 864	0	0	64 023
Switzerland	103 779 615	127 665 846	23 886 231	0	74 066 755	0	0	978 928
Ukraine	533 410	13 858 184	13 324 774	0	0	13 858 184	0	0
United Kingdom of Great Britain and Northern Ireland	38 205 090	86 474 814	48 269 724	0	52 247	0	43 858 847	1 105 371
Total	**441 810 850**	**446 738 808**	**4 927 958**	**47 376 477**	**146 549 781**	**204 528 439**	**553 107 214**	**81 684 228**

[a] Acquisition from another national registry. See decision 13/CMP.1, annex, paragraph 30.

[b] Transfer to another national registry. See decision 13/CMP.1, annex, paragraph 30.

[c] Net transfer is equal to transfer minus acquisition.

[d] Forwarding from the clean development mechanism registry to a national registry. See decision 3/CMP.1, annex, paragraph 66(b). Note that this excludes transfers from the clean development mechanism registry to a national registry in support of the Adaptation Fund.

[e] Transfer within the registry. See decision 13/CMP.1, annex, paragraph 30.

[f] See decision 13/CMP.1, annex, paragraphs 23–29; decision 3/CMP.1, annex, paragraphs 64–66; and decision 5/CMP.1, annex, paragraphs 36 and 37. Issuance of emission reduction units by converting assigned amount units or removal units is included.

[g] See decision 13/CMP.1, annex, paragraph 34.

[h] See decision 13/CMP.1, annex, paragraph 33.